

VLBA

Antenna Memo #8

Interoffice

**National Radio Astronomy Observatory**

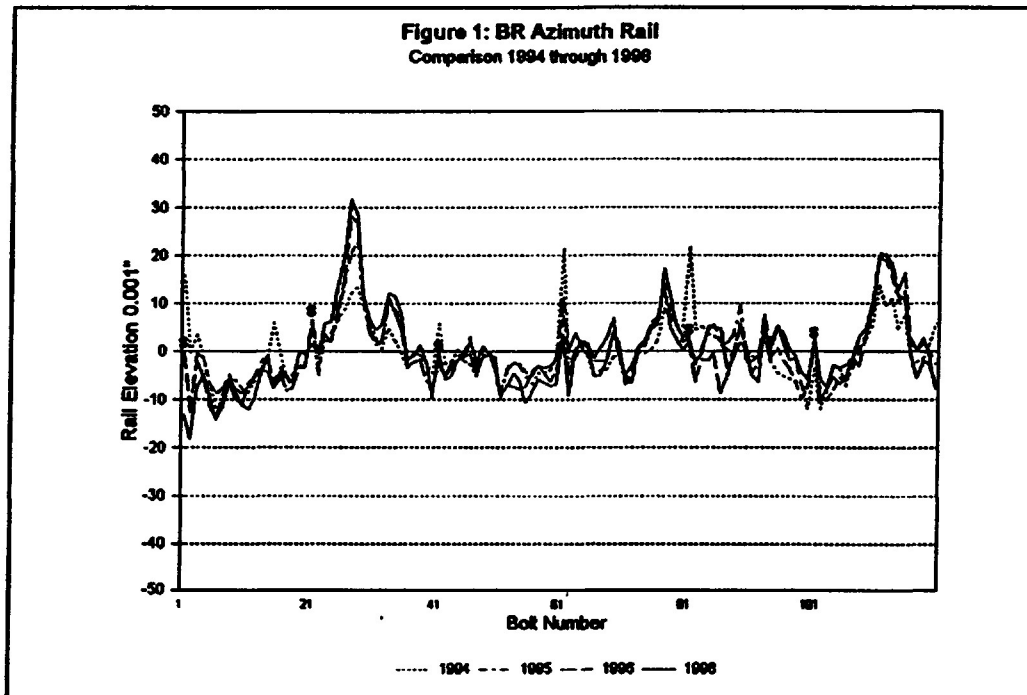
New Mexico

February 18<sup>th</sup>, 1998

**TO:** Clint Janes, Paul Rhodes, Jim Ruff, Lew Serna, Dick Sramek, Guy Stanzione, Jon Thunborg, BRVLBA  
**FROM:** Bob Broilo  
**SUBJECT:** Brewster, WA VLBA Site Azimuth Rail Inspection, February 2<sup>nd</sup>

On Monday, February 2<sup>nd</sup>, 1998, I arrived at the Brewster, Washington VLBA Site. The weather was generally good with light rain and fog. The area was in the midst of a "heat wave" and the temperatures soared into the upper 30s. This melted what would have been ice and greatly helped the work that needed to be done.

The site technicians and I set up the instrument and we measured the Azimuth Rail. I installed the spreadsheet program on the station computer and used it to plot the rail elevations. We were able to compare these to previous elevations. A plot comparing the rail elevations through several years is shown in Figure 1.



This rail and supporting grout seems to be much more stable than the rails we have been repairing. There has been little movement since 1996. There is an

area at bolts 27 and 28 that has been steadily growing since 1994. This area will need to be repaired. There is another area between bolts 110 and 115 that is a slight depression, but does not seem to be growing. It is not clear if this area has suffered damage. It would be easy to spot repair this area if necessary.

We removed some of the Vulkem from the two problem areas. This is an arduous task! The Vulkem is tough stuff. The grout under the Vulkem was slightly damp, but much drier than the surrounding foundation. The grout immediately under the problem areas is sandy and loose, but not muddy and cracked like the Mauna Kea grout is.

I would recommend we do two spot repairs to this azimuth rail on a double maintenance day this summer. We can concentrate on fixing the Los Alamos grout during major maintenance periods.